

ONTARIO MINISTRY OF ENVIRONMENT
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OPERATING SUMMARY

1974

LABORATORY & RESEARCH DIVISION
MINISTRY OF THE ENVIRONMENT

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VILLAGE OF

POINT EDWARD

WATER POLLUTION CONTROL PLANT

**TD
367
.A56
P65
1974**

Point Edward : water pollution
control plant.

81834



Ontario

MINISTRY OF THE ENVIRONMENT

MINISTER
Honourable William G. Newman

DEPUTY MINISTER
E. Biggs

ASSISTANT DEPUTY MINISTER
REGIONAL OPERATIONS
J. Barr

REGIONAL OPERATIONS DIVISION

DIRECTOR, SOUTHWESTERN REGION
D. McTavish

MANAGER, UTILITY OPERATIONS
A. Ladbrooke

POINT EDWARD
WATER POLLUTION CONTROL PLANT

operated for
THE VILLAGE OF POINT EDWARD
by the
MINISTRY OF THE ENVIRONMENT

1974 ANNUAL OPERATING SUMMARY

prepared by
Plant Performance Unit
TECHNICAL SERVICES BRANCH
T. Cross, Director



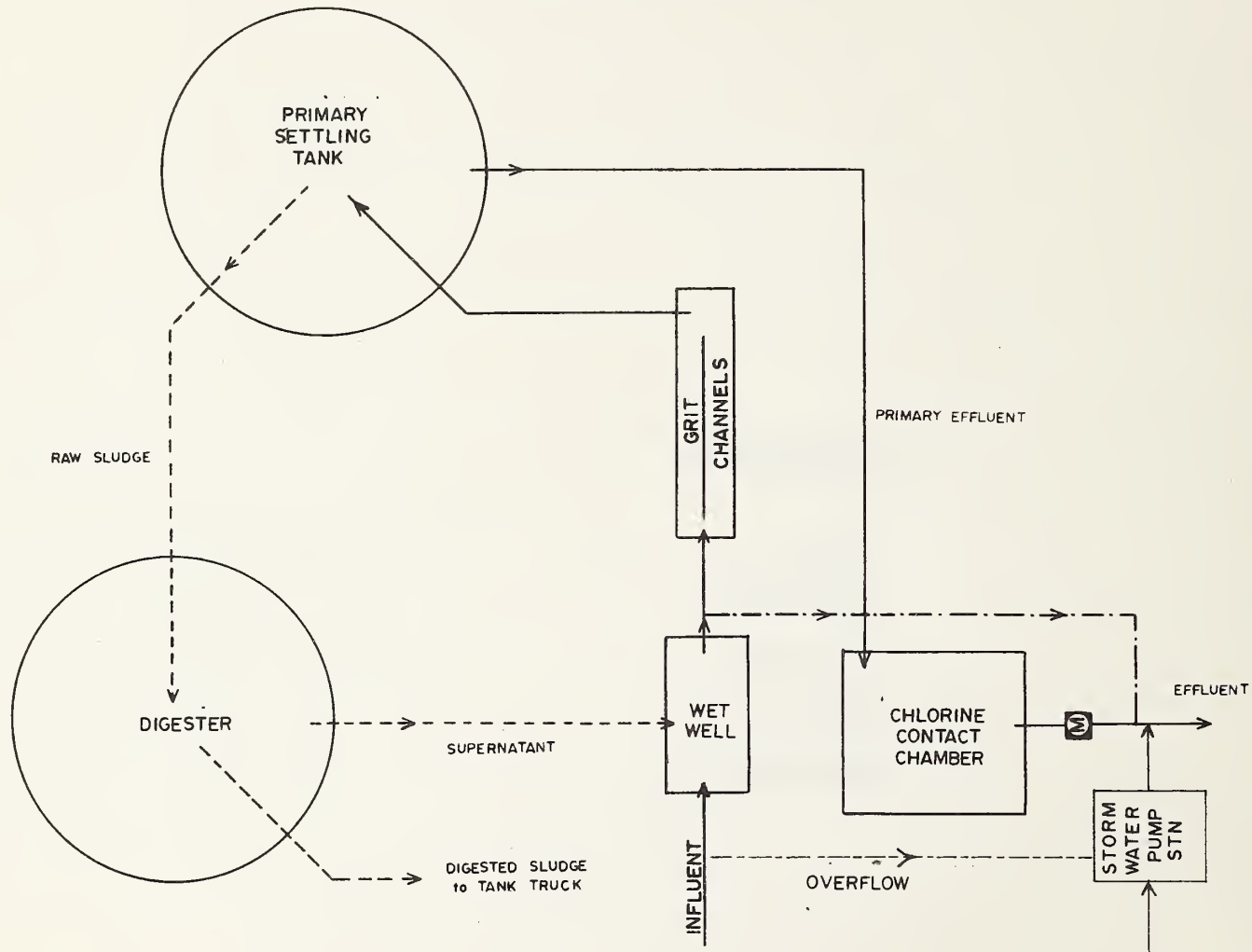
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VILLAGE OF POINT EDWARD
WATER POLLUTION CONTROL PLANT



DESIGN DATA

PROJECT Village of
Point Edward WPCP

PROJECT NO. 2-0036-59

TREATMENT Primary

DESIGN FLOW 0.57 mgd

DESIGN POPULATION 5,700

BOD - Raw Sewage 170 mg/l
- Removal 47%

SS - Raw Sewage 200 mg/l
- Removal 60%

RAW SEWAGE PUMPS

Type: Fairbanks-Morse
Size: Two 1300 Igpm @ 35' tdh

PRIMARY TREATMENT

Screening

Type: Bar screens, manually cleaned
Size: Two; 1 $\frac{1}{4}$ " spacing

Grit Removal

Type: Channels
Size: Two 16 X 1.75 X 2'
Retention: 0.88 min

Primary Sedimentation

Type: Dorr
Size: One 35' dia x 10' swd
(60,000 Imp. gal)
Retention: 2.53 hr
Loading: Surface, 594 Imp. gal/ft²/day
Weir, 5,190 Imp. gal/ft/day

CHLORINATION

Type: BIF
Size: One 200 lb/day
Chlorine Contact Chamber

Size: One 20 X 10 X 8 $\frac{1}{2}$ ' (10,600 gal)
Retention: 27 min

OUTFALL

- to St. Clair River

SLUDGE HANDLING

Digestion System - Single-stage

Type: Dorr: 2 draft tube mixers
Size: One 35' dia x 20' swd (19,200
cu ft or 119,808 gal)
Loading: 1.07 lb/cu ft/mo

PUMPING STATIONS

Storm Water

Type: Custom Built
Size: One 4700 gpm @ 20' tdh
Two 10000 gpm @ 20' tdh
with two 100 hp diesel standbys

Helena Street

Type: Smith & Loveless
package lift station
Size: Two 750 gpm @ 40' tdh

Michigan Avenue

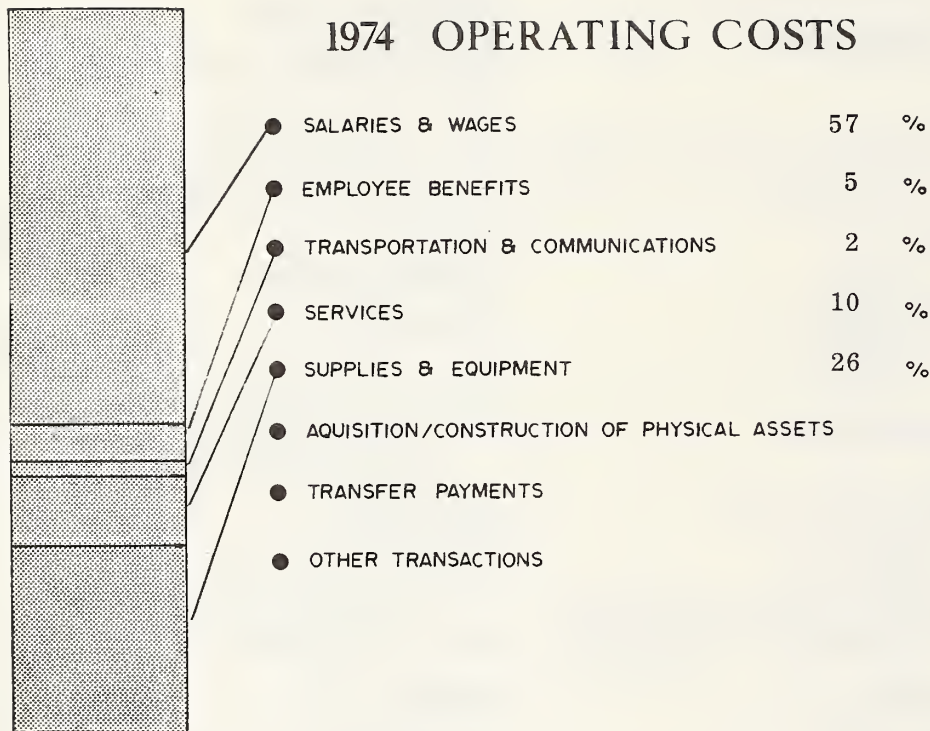
Type: Smith & Loveless
package lift station
Size: Two 500 gpm @ 20' tdh

402 Station (2-0183-65)

Type: Smith & Loveless
Package Lift Station
Size: Two 175 gpm @ 23' tdh

ANNUAL COSTS

1974 OPERATING COSTS



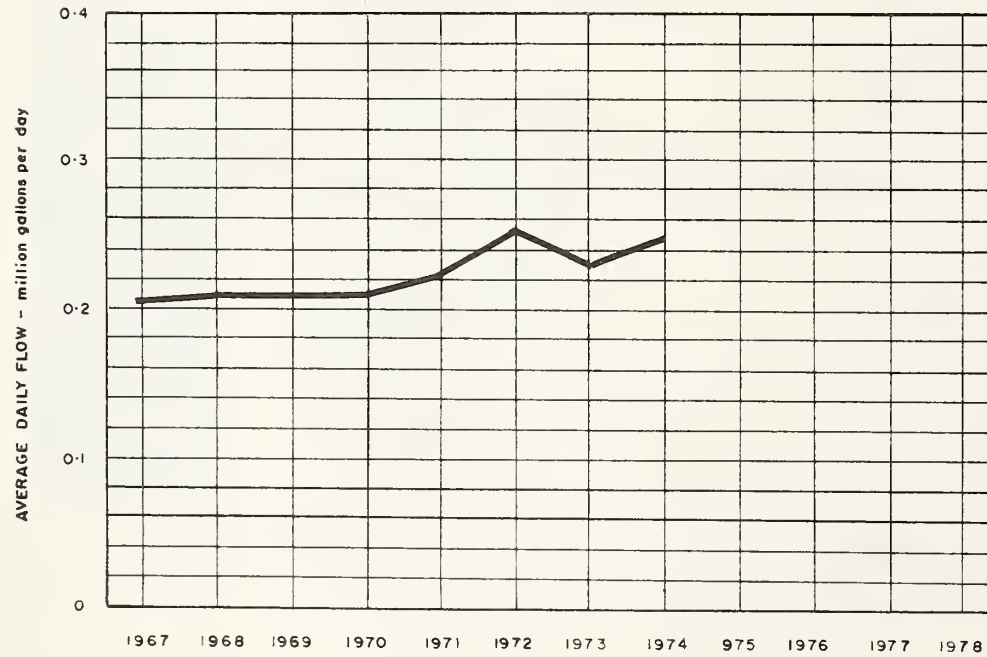
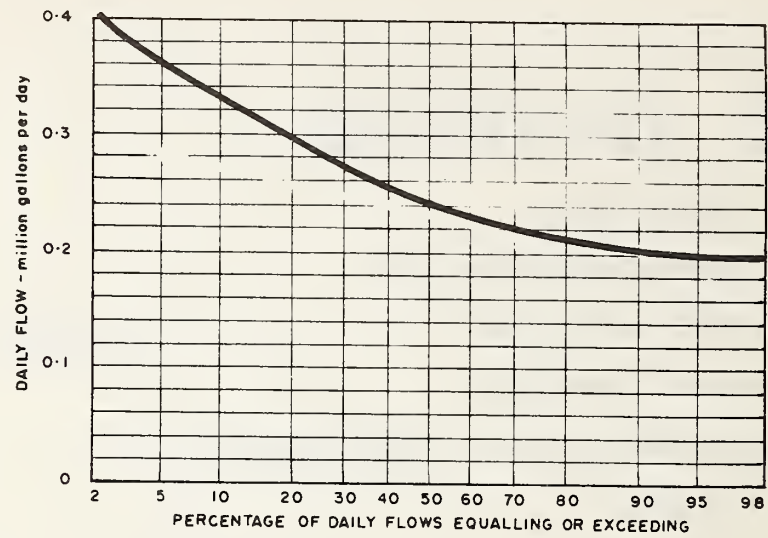
YEARLY OPERATING COSTS

YEAR	SEWAGE TREATED in million gallons	TOTAL OPERATING COSTS	UNIT COSTS	
			\$/M.G	¢/lb BOD
1969	77.8	17,290	222	35
1970	77.6	21,161	273	39
1971	83.5	20,494	246	52
1972	91.2	21,734	233	46
1973	84.3	25,871	307	24
1974	92.4	35,340	382	38

OPERATING EXPENDITURES

Regular Staff	\$ 20,239	\$
Casual (Unclassified) Staff	-	
TOTAL SALARIES AND WAGES		20,239
TOTAL EMPLOYEE BENEFITS		1,913
TOTAL TRANSPORTATION AND COMMUNICATIONS		764
Insurance	1,319	
Sludge Haulage	1,250	
Repairs and Maintenance	758	
Other Services	81	
TOTAL SERVICES		3,408
Machinery and Equipment	777	
Chemicals	2,400	
Utilities	4,349	
Other Supplies and Equipment	1,490	
TOTAL SUPPLIES AND EQUIPMENT		9,016
TOTAL AQUISITION/CONSTRUCTION OF PHYSICAL ASSETS		-
TOTAL TRANSFER PAYMENTS		-
OTHER TRANSACTIONS		-
GRAND TOTAL	GRAND TOTAL	\$ 35,340

PROCESS DATA FLOWS

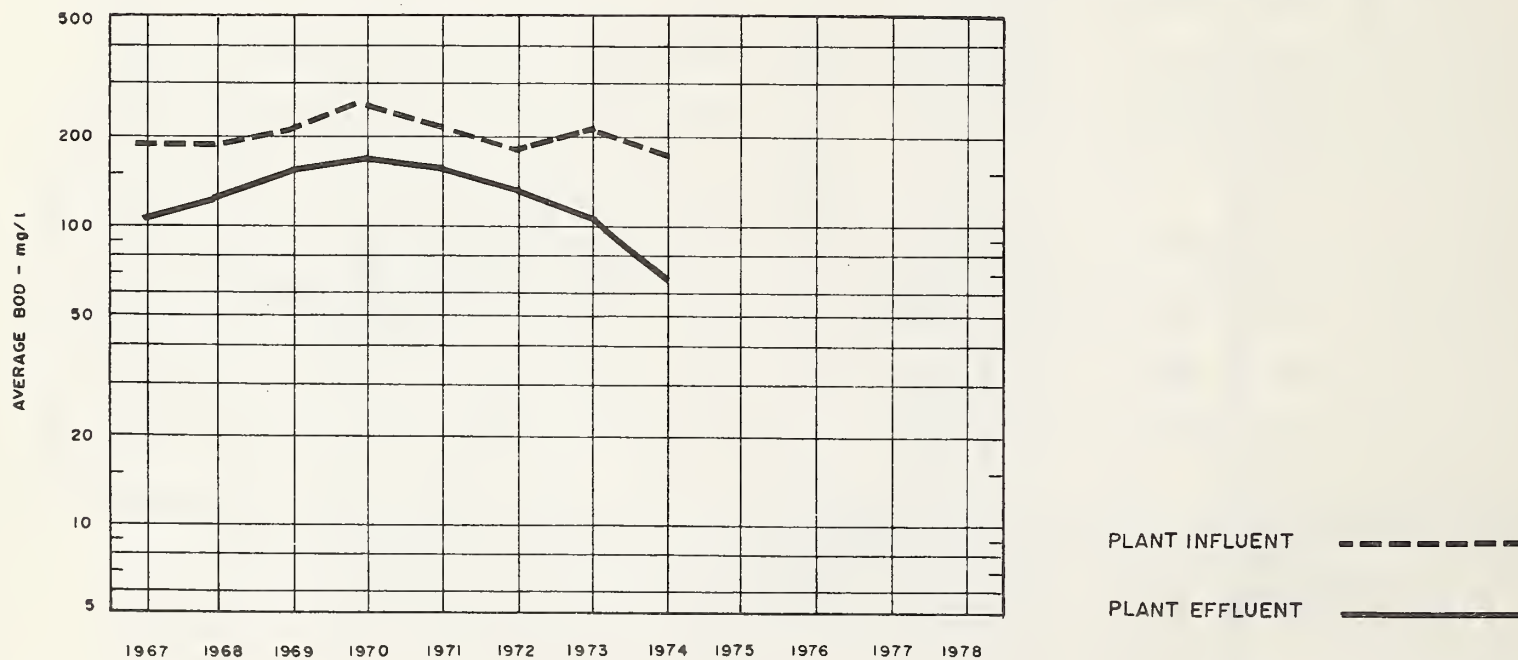
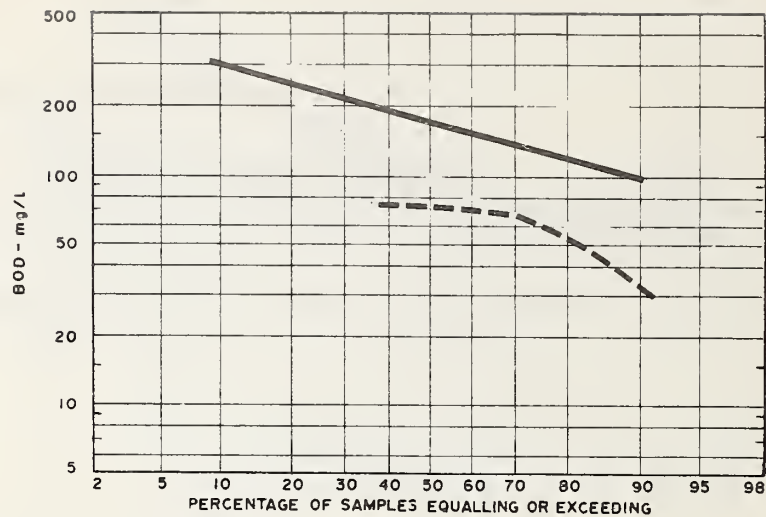


DESIGN CAPACITY 0.57 MGD

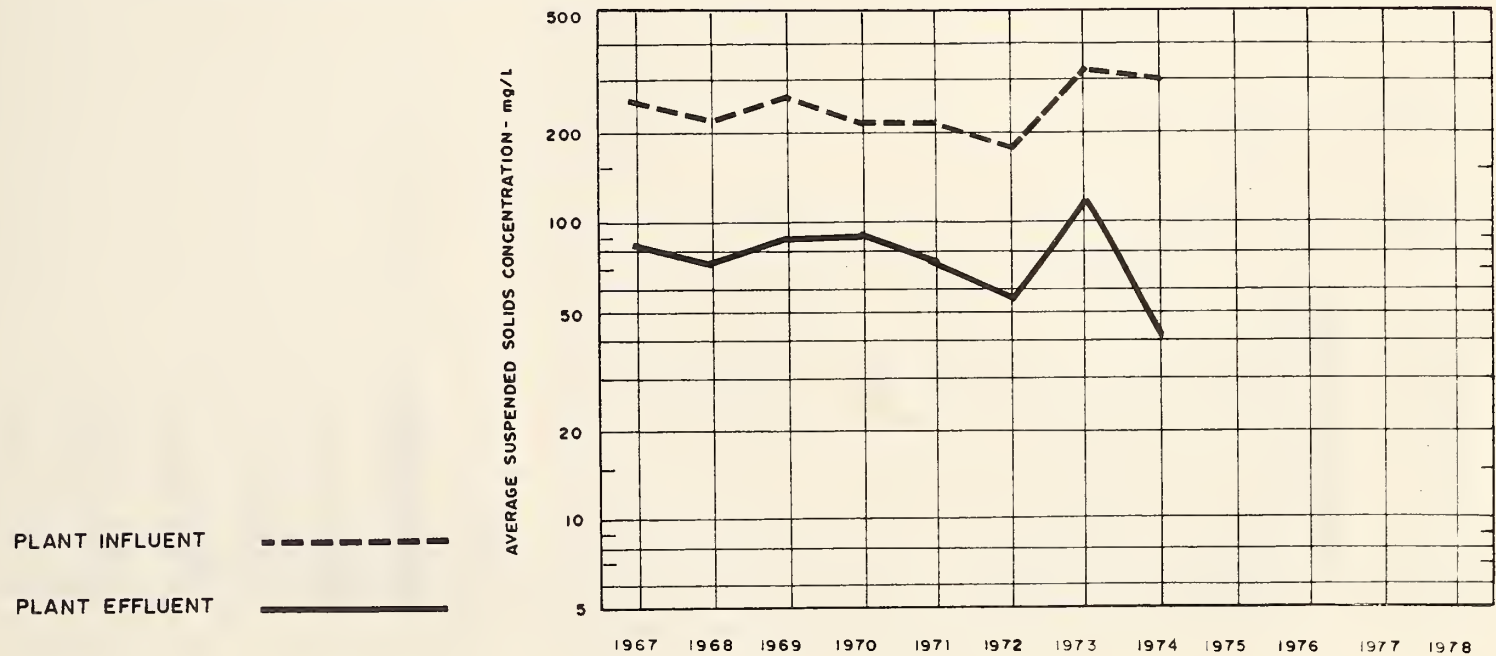
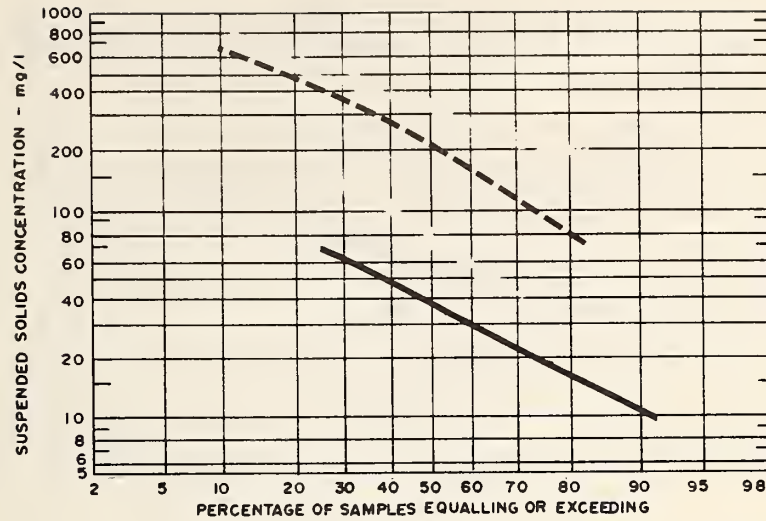
PLANT PERFORMANCE

MONTH	FLOWS			BIOCHEMICAL OXYGEN DEMAND				SUSPENDED SOLIDS				PHOSPHORUS	
	TOTAL FLOW	AVERAGE DAY	MAXIMUM DAY	INFLUENT	EFFLUENT	REDUCTION		INFLUENT	EFFLUENT	REDUCTION		INFLUENT	EFFLUENT
	million gallons	mil. gal	mgd	mg/l	mg/l	%	10 ³ pounds	mg/l	mg/l	%	10 ³ pounds	mg/l P	mg/l P
JAN	8.06	.26	.39	110				210	40	81	14	6.5	1.3
FEB	7.63	.27	.40	125	67	46	4	170	30	82	11	7.5	2.0
MAR	10.01	.32	.47	170	88	48	8	280	60	79	22	12.0	1.3
APR	8.48	.28	.35	180	60	67	10	150	10	93	12	7.5	1.5
MAY	9.11	.29	.44	110	55	50	5	20	10	50	1	9.0	1.4
JUNE	7.13	.24	.27	120	46	62	5	220	20	91	14	11.0	.6
JULY	7.55	.24	.26										
AUG	7.62	.25	.27	200	70	65	10	210	70	83	13	10.0	
SEPT	6.46	.22	.26	300	85	72	14	1250	80	94	76	17.0	6.0
OCT	6.49	.21	.24	260	95	63	11	170	40	76	8	11.0	2.6
NOV	6.75	.23	.25	170	70	59	7	550	75	86	32	17.0	3.2
DEC	7.20	.23	.27										
TOTAL	92.49	-	-	-	-	-	92	-	-	-	247	-	-
AVG.		.25	MAXIMUM .47	170	70	59	8	309	42	86	21	10.5	2.2
No. of Samples	-	-	-	11	10	-	-	11	11	-	-	11	10

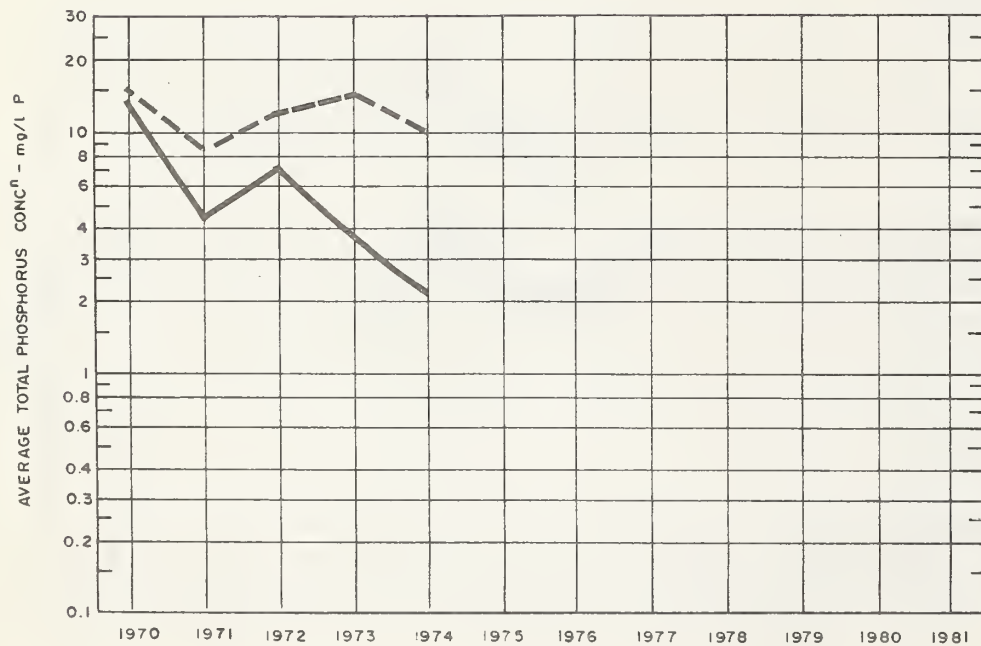
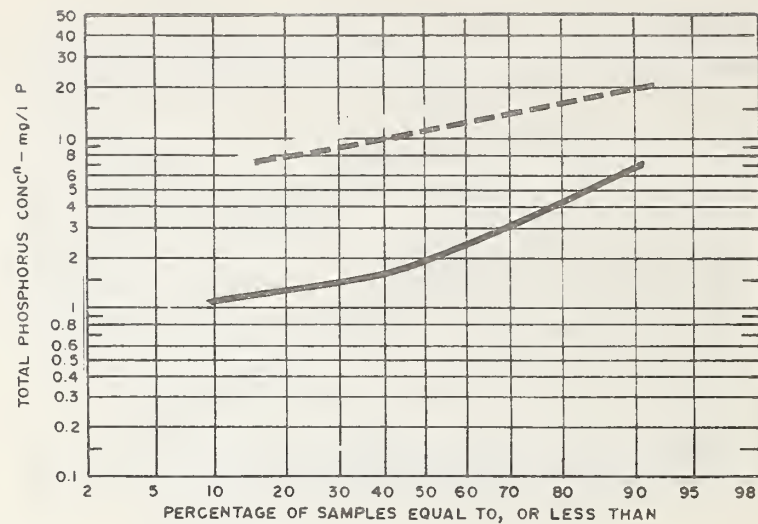
BIOCHEMICAL OXYGEN DEMAND



SUSPENDED SOLIDS



PHOSPHORUS

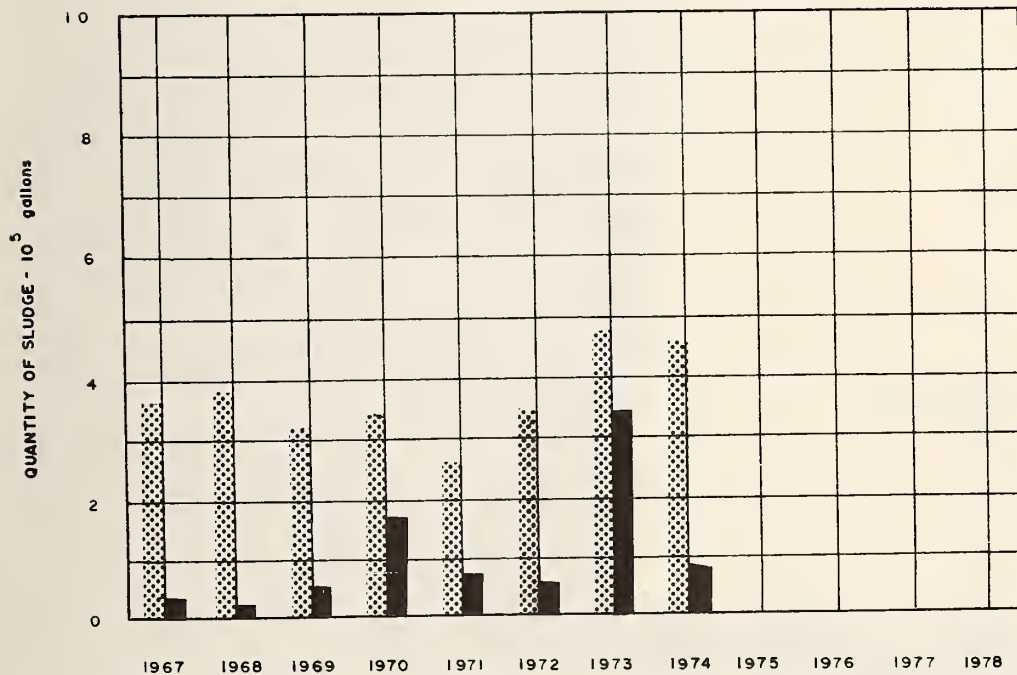
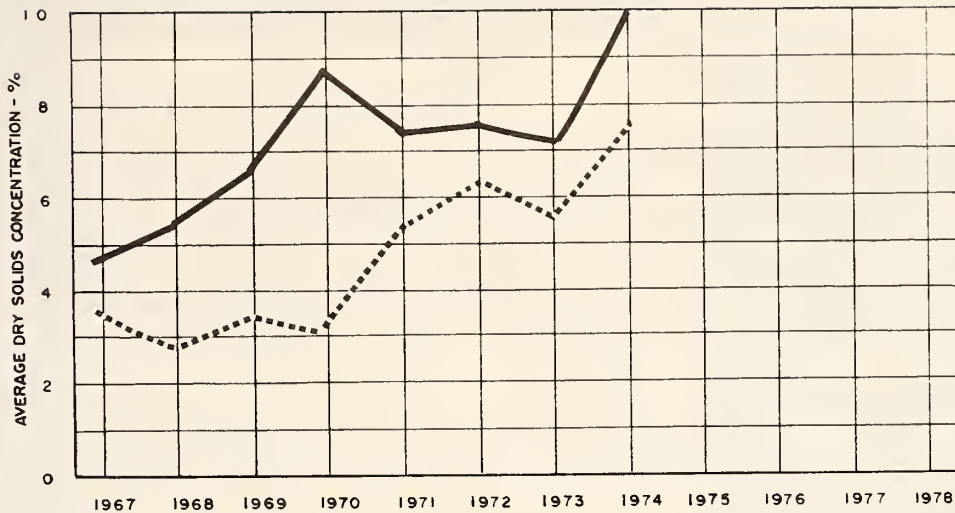


PLANT INFLUENT

PLANT EFFLUENT

DIGESTION

RAW SLUDGE
DIGESTED SLUDGE ———



RAW SLUDGE TO DIGESTER
DIGESTED SLUDGE REMOVED ———

TREATMENT DATA

MONTH	GRIT QUANTITY REMOVED cubic feet	CHLORINATION		SLUDGE DIGESTION and DISPOSAL							
		CHLORINE USED pounds	AVERAGE DOSAGE mg/l	RAW SLUDGE			DIGESTED SLUDGE			SUPERNATANT	SLUDGE HAULED cubic yards
				QUANTITY 10 ³ gallons	TOTAL SOLIDS %	VOLATILE SOLIDS %	QUANTITY REMOVED 10 ³ gallons	TOTAL SOLIDS %	VOLATILE SOLIDS %	TOTAL SOLIDS %	
JAN	43	705	8.7	41.4			8.5				50
FEB	49	690	9.0	37.9			8.5	10.2	40		50
MAR	38	648	7.0	40.5	6.5	47	5.1			1.3	30
APR	36	569	6.7	40.1			8.5				50
MAY	48	551	6.0	40.6	8.7	50	10.2				60
JUNE	52	547	7.7	39.2			3.4				20
JULY	49	620	8.2	38.2			8.5				50
AUG	42	511	6.7	39.3			3.4				20
SEPT	21	547	8.5	37.0			3.4				20
OCT	21	640	9.9	37.2			1.7				10
NOV	13	616	9.1	37.5			6.8				40
DEC	18	634	8.8	38.7			17.0				100
TOTAL	430	7278	—	467.6	—	—	85.0	—	—	—	500
AVG.	5 cubic feet/mil gal		7.9	39.0	7.6	49	7.1	10.2	40	1.3	42

Date Due

LAB

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